CLAIMS

1. A removable optical device (08) for releasable attachment to a microscope (01) suitable for contact-free observation of an eye (05) with at least one lens (09), which can be arranged between an objective (04) of the microscope (01) and the eye (05) in the optical axis (06) of the microscope (01) and can be adjusted with a drive device, with which the lens (09) can be adjusted along the optical axis (06) of the microscope (01),

   characterized in that

   an electric drive motor (24) is integrated in the removable device (08), which, together with the device (08), can be detached from the microscope and sterilized by a suitable method.

2. The device according to claim 1,

   characterized in that

   the drive motor (24) is arranged in a housing (18), which encloses the drive motor (24) against the surrounding environment in a manner sealed from gases and moisture.

3. The device according to claim 2,

   characterized in that

   the drive movement of the drive motor (24) is transferred to a drive part (25a) of a contact-free acting coupling (25), wherein the drive part (25a) of the coupling (25) is arranged together with the drive motor (24) encapsulated in gas- and moisture-sealed

manner in the housing (18), and wherein the drive movement of the drive part (25a) can be transferred in a contact-free manner to an output part (25b) of the coupling (25) arranged outside of the encapsulated housing (18).

4. The device according to claim 3,

characterized in that

the coupling is embodied in the form of a magnetic coupling (25).

5. The device according to one of claims 1 through 4,

characterized in that

the housing (18) has a through opening (28) for passage of an electrical cable (21), which is gas and moisture sealed by means of a sealing means (29, 31) against the surrounding environment.

6. The device according to claim 5,

characterized in that

a sealing ring (29) is provided as the sealing means, which can be attached with a suitable attachment means (30) in a sealing gap between the housing (18) and the electrical cable (25).

7. The device according to claim 5 or 6,

characterized in that

on the end of the electrical cable (21), a plug (22) that is suited for sterilization is provided.

8. The device according to one of claims 2 through 7,

characterized in that

at least one hollow chamber in the interior of the housing (18) is lined with a hardened sealing compound (31).

9. The device according to claim 8,

characterized in that

the housing (18) has at least one fill opening (37), through which the sealing compound (31) can be filled in the housing after the mounting of the drive motor (24) in the housing (18).

10. The device according to one of claims 2 through 9,

characterized in that

the housing is made from at least two housing parts (18a, 18b) connected to one another in a gas- and moisture-sealed manner.

11. The device according to one of claims 1 through 10,

characterized in that

an accumulator for network-free energy supply of the drive motor with drive energy is provided on the device.

12. The device according to one of claims 1 through 11,

characterized in that

a device for wireless data transmission, in particular, an infrared interface, is provided on the device.

13. The device according to one of claims 1 through 12,

characterized in that

the lens (09) together with a holding device (10) provided for attachment of the lens (09) on the device (08) is embodied in the form of a one-way article.

14. The device according to claim 13,

characterized in that

the lens (09) and/or the holding device (10) is made from plastic.

15. The device according to one of claims 1 through 14,

characterized in that

the lens (09) is embodied in the form of a higher-diffracting, aspherical magnifiers.